Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

BASE MAPS OF THE UNITED STATES.

Numerous Departments of the Government, as well as of the several States, have occasion to prepare small scale maps, upon which various features are shown. Those which the Government prepares are large wall maps of the whole United States for issuance by the Land Office and by the Geological Survey, for showing separate features, the former chiefly publishing land lines and grants; the latter, topographic relief. The Post Office Department publishes separate or combined State maps, showing post routes. Commissioners of Railways of the various States publish State maps showing the railways within their borders.

The United States Geological Survey has occasion, in connection with the publication of reports of its various branches, to prepare small scale maps, either of octavo or quarto size, for publication with texts, or larger maps of States or groups of States, showing topographic relief, on which are printed various symbols to indicate geologic, hydrographic, or forest conditions.

Until a year ago it was the practice of authors of the Geological Survey to prepare their own manuscript maps. As a result it became apparent in the course of time that the Survey was producing maps on widely variant scales, which were yet so near one to the other that a systematic revision of scales for the bases upon which maps were produced was necessary. To this end the Director appointed a Committee on Base Maps, representing the three producing branches of the Survey, with Mr. H. M. Wilson, geographer, in charge of the Eastern Section of Topography, as chairman; and Messrs. C. Willard Hayes, geologist, in charge of geology, and F. H. Newell, chief of the hydrographic branch, as members.

After several months of consideration this Committee recommended the subdivision of the work of preparing such maps into two heads: 1. Small scale outline base maps, to be used in textual illustration of reports. These are such maps as small octavo or quarto page maps of North America, of the United States, and of groups of States, with only such data shown as will render them available as base maps upon which to illustrate all the varieties of topics which may be under consideration by the various branches of the Survey. 2. Topographic base maps, which, in addition to culture and drainage, represent the relief of the surface by contours, including the large topographic wall map of the United States, scale of

1:2,500,000, and such topographic maps of single States or groups of States as may be needed.

The chief of the Division of Illustrations was made a custodian of all base maps, and in his division small scale outline base maps are prepared. Among such as have already been adopted are: 1. An outline map of North America, double-page quarto, 10 by 15 inches, scale 1 inch to 400 miles; 2. Outline map of the United States, same dimensions as above, scale 1 inch to 200 miles; 3. Outline double-page octavo map of the United States, dimensions 7¼ by 9⅜ inches, scale 1 inch to 275 miles. Also a series of small scale outline maps of areas of States, or groups thereof, on scales of 100 miles to an inch and multiples or even divisions thereof.

The topographic branch is charged with the preparation of large scale topographic base maps. The scales adopted for these are, for the large topographic base map of the United States, 40 miles to 1 inch, with contour interval of 1,000 feet; and for States or areas of medium size, as Utah, Kansas, etc., 12 miles to 1 inch, with contour intervals of 100 to 500 feet, according to the degree of erosion and the relative elevation. For large areas, such as Texas, Colorado, etc., the scale is 20 miles to 1 inch, with contours of 250 to 500 feet interval. For smaller areas, multiples of the above. The scales chosen in each case to be such as to permit of publishing the results on one map sheet not exceeding five feet in either direction; excepting the United States base map.

There have already been engraved and published by the Geological Survey six topographic base maps, as follows: Massachusetts-Rhode Island, scale, 1:250,000, or about 4 miles to one inch, contour interval, 100 feet; Connecticut, scale, 1:125,000, or about 2 miles to 1 inch, contour interval, 100 feet; Kansas, scale, 1:750,000, or about 11 8/10 miles to 1 inch, contour interval, 100 feet; Indian Territory, scale, 1:500,000, or about 8 miles to 1 inch, contour interval, 100 feet; Texas, including Oklahoma and part of New Mexico, 25 miles to 1 inch, contour interval, 250 feet; Utah, 12 miles to 1 inch, contour interval, 1,000 feet; Colorado, 12 miles to 1 inch, contour interval, 500 feet. In addition, the following are approaching completion, and will soon be ready for engraving: Group of Virginia–West Virginia–Maryland–Delaware, 10 miles to 1 inch, contour interval, 100 feet. Group of South Dakota–Nebraska–Kansas and parts of Wyoming and Colorado, scale 16 miles to 1 inch, contours of 250 and 500 feet interval. Some of the above, prepared prior to the adoption of the scheme of base maps scales, do not conform to the same.

The scales adopted for the standard topographic atlas sheets of the United States Geographical Survey, meaning those which are being mapped in the field from surveys made by the topographic branch and not base maps as above described, which are compilations, remain as heretofore exact multiples of 1:1,000,000, as 1:250,000, 1:125,000, and 1:62,500, or approximately 4 miles, 2 miles, and 1 mile to 1 inch, with contour intervals ranging down from 200 feet to 10 feet. For larger scale topographic maps required for special economic, mining or reclamation studies, various scales have been used in the past. Hereafter the same are to be exact multiples of 1,000 feet to 1 inch, the equivalent of which is 1:12,000; as 1:24,000, 1:36,000, and 1:48,000; or in more detailed maps, 1:6,000.

The topographic base map of the United States, better known as the 9-sheet wall map, was first published in 1890, and after careful revision was reissued under the date of 1898. The scale is 1:2,500,000, and contours are shown on it with the following intervals: 100, 500, 1,000 and 1,500 feet, above which they are 1,000 feet apart.

The Committee on Base Maps has recommended the entire redrawing and recompilation of this base map to bring up to date all the map data now available. This work is progressing rapidly, and the drafting may be completed within a few months. The engraving will doubtless take several months longer. The scale is to remain as heretofore, but the contour interval has been made uniformly 1,000 feet throughout the map. That portion of the area of the map covered by the detailed topographic surveys of the bureau, now aggregating an area of about 900,000 square miles, will be carefully revised from the topographic sheets, and engraved on a series of copper-plates. The remainder of the map surface will be compiled. It consists chiefly in the corrections of the existing copper-plates, which will be replaced from year to year as additional topographic mapping is available for incorporation into the new. It is a very difficult and important undertaking. It involves going over 1,300 atlas sheets in great detail, picking up and accentuating the 1,000 foot contour and such drainage and railway lines, county lines, etc., as will show upon the scale of the reduction. In addition to those facts heretofore shown on the existing map, the elevation of each county seat so far as obtainable will be printed under its name. The contouring will be in much greater detail, in fact, with all the detail that the scale will permit, for the areas in which topographic maps are available.

In addition to relief by 1,000-foot contours, which will be printed in brown, and drainage, which will be printed in blue, there will be printed in black such cultural features as State and county boundaries, names of county seats and important cities, the lines and names of all railways, and the outlines of Indian, forest, and other public reservations. H. M. W.

MR. E. A. REEVES'S NOTES AND SUGGESTIONS ON GEOGRAPHICAL SURVEYING AND PRACTICAL ASTRONOMY SUITED TO PRESENT REQUIREMENTS.

BY

G. W. LITTLEHALES.

In the exordium of his address, in September, 1903, before the Southport Meeting of the British Association for the Advance of Science, Mr. Reeves has pointed out that the era of general geographical exploration has practically closed, and that the era of mensurational geography has set in throughout nearly the whole world. Except in the polar regions there are no longer any vast areas of the earth into which an explorer may penetrate and emerge with the glory of a Livingstone or a Stanley. Men capable of giving a good account of what they observe have visited nearly every part of the earth's surface and brought back enough to provide for the first rude approximation to the mapping of the world. The needs of the present time require that travellers who aim to contribute toward an advancement of geographical knowledge should be equipped to record their observations upon a scientific basis. In order that conjecture may give place to measurement, Mr. Reeves rightfully advocates that the explorer should expand over the region to be traversed a system of rapid triangulation, starting from a measured base-line connected with some point where latitude and longitude have been fixed by previous operations or by his own determination, and should delineate the surface forms and other characteristics, in relation to the stations of the triangulations, by the use of one of the more simple forms of plane-table.

For the construction of the plane-table sheets Mr. Reeves